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FIG. 1.

FIG. 3.

FIG. 4.

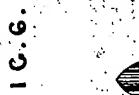
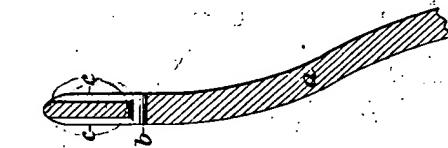
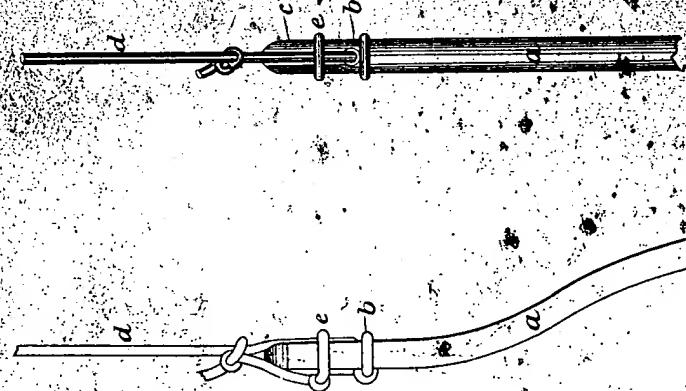
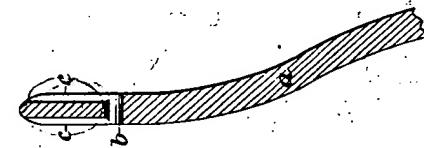
FIG. 1.

FIG. 2.

FIG. 5.

FIG. 6.

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ARNER'S SHIPS  
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axing is partly worn

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- imately after the

A.D. 1866, 9th FEBRUARY. N° 413.

## Fish Hooks.

**LETTERS PATENT** to Joseph Warner, of Redditch, in the County of Worcester, Fish Hook and Needle Manufacturer, for the Invention of  
 "IMPROVEMENTS IN FISH HOOKS."

Sealed the 31st July 1866, and dated the 9th February 1866.

**PROVISIONAL SPECIFICATION** left by the said Joseph Warner at the Office of the Commissioners of Patents, with his Petition, on the 9th February 1866.

I, JOSEPH WARNER, of Redditch, in the County of Worcester, Fish Hook and Needle Manufacturer, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN FISH HOOKS," to be as follows:—

My Invention consists of the improvements herein-after described in fish hooks, whereby the gut is attached more securely and readily to the shanks of the hooks than to fish hooks of the ordinary construction. By constructing fish hooks according to my Invention the gut is also attached without whipping, and a very neat connection effected.

In fish hooks as ordinarily constructed the gut is fastened either to a loop at the extreme end of the shank or to a plain shank by whipping, that is to say, by coiling a thread around the gut and shank of the fish hook.

In constructing fish hooks according to my Invention I make an eye similar to the eye of a needle near the end of the shank of the hook, the eye opening into a depression or groove ~~made~~ <sup>now</sup> made according to my said depressions or ~~pro~~ <sup>now</sup> drawn to a large scale in order the better to

*'s Improvements*

described are of such a size and depth that they readily gut to be fastened to the hook. In fastening the gut to a fish hook of this construction the end of the gut is passed through the eye and tied round the shank one or more times as may be necessary, and finally tied to the gut at the top of the shank, the gut occupying the grooves or depressions in the sides of the shank. A very neat and secure junction of the gut to the hook is thus made. Although a much neater connection of the gut with the hook is made where the eye opens into grooves as described, yet the said grooves may be dispensed with, and the gut connected with the hook by an ordinary knot. In this case the eye is made nearer the top of the shank than when the grooves are employed. The eyes in the shanks of the fish hooks may be stamped or pierced therein, and the said eyes, as well as the grooves, or depressions starting from the said eyes, may be of various sizes and shapes.

My Invention is applicable to fish hooks of various kinds.

**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Joseph Warner in the Great Seal Patent Office on the 3rd August 1866.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOSEPH WARNER, of Redditch, in the County of Worcester, Fish Hook and Needle Manufacturer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Ninth day of February, in the year of our Lord One thousand eight hundred and sixty-six, in the twenty-ninth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Joseph Warner, Her special licence that I, the said Joseph Warner, my executors, administrators, and assigns, or such others as I, the said Joseph Warner, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN FISH HOOKS," upon the condition (amongst others) that I, the said Joseph Warner, my executors or administrators, by an instrument in writing or one of their hands and seals, should particularly set forth the said Invention, and in what manner to be filed in the Great

*Warner's Improvements in Fish Hooks.*

dily  
Seal Patent Office within six calendar months next and immediately after the  
fish  
and date of the said Letters Patent.

tied **NOW KNOW YE**, that I, the said Joseph Warner, do hereby declare  
ons the nature of the said Invention, and in what manner the same is to be  
the performed, to be particularly described and ascertained in and by the following  
the statement thereof, that is to say:

aid My Invention consists of the improvements herein-after described in fish  
an hooks, whereby the gut or other material is attached more securely and  
an readily to the shanks of the hooks than to fish hooks of the ordinary con-  
oks construction. By constructing fish hooks according to my Invention the gut or  
es other material is also attached without whipping, and a very neat connection  
es effected.

In fish hooks as ordinarily constructed the gut is fastened either to a loop  
the extreme end of the shank or to a plain shank by whipping, that is to say,  
coiling a thread around the gut and shank of the fish hook.

In constructing fish hooks according to my Invention I make an eye similar  
ed to the eye of a needle near the end of the shank of the hook, the said eye  
be opening into a depression or groove made at opposite sides of the shank,  
aid depressions or grooves passing from the eye to the top of the shank. The  
reoves or depressions described are of such a size and depth that they readily  
ceive the gut to be fastened to the hook. In fastening the gut to a fish  
hook of this construction the end of the gut is passed through the eye and tied  
round the shank one or more times as may be necessary, and finally tied to  
the gut at the top of the shank, the gut occupying the grooves or depressions  
the sides of the shank. A very neat and secure junction of the gut to the  
hook is thus made. Although a much neater connection of the gut with the  
hook is made when the eye opens into grooves as described, yet the said  
grooves may be dispensed with, and the gut connected with the shank by  
ordinary knot. In this case the eye is made nearer the top of the shank  
when the grooves are employed. The eyes in the shanks of the hooks  
may be stamped or pierced therein, and the said eyes, as well as the grooves  
or depressions starting from the said eyes, may be of various sizes and shapes.

My Invention is applicable to fish hooks of all kinds and sizes.  
Having explained the nature of my Invention, I will proceed to describe  
with reference to the accompanying Drawing the manner in which the same  
is to be performed.

Figure 1 represents an elevation of a fish hook made according to my  
Invention, the said hook being drawn to a large scale in order the better to

## Warner's Improvements in Fish Hooks.

exhibit the construction of the said hook, and Figure 2 is a section of a portion of the shank of the hook; Figures 3 and 4 illustrate the manner in which the gut is fastened to the shank of the hook.

a is the shank of the fish hook, near the end of which is an eye b, the said eye opening into depressions or grooves c, c, made at opposite sides of the shank a, and passing from the eye b to the top of the shank, as represented in the Drawing. These depressions or grooves c, c, are of a size and shape proper to receive the gut d to be fastened to the shank of the hook, as represented in Figures 3 and 4. In fastening the gut d to the hook the end of the gut is passed through the eye b and tied at the said eye; the gut is then carried up the side grooves or depressions c, c, and again tied at e, and finally tied above the top of the shank, as will be understood by an examination of Figures 3 and 4. The gut d is thus securely fastened to the shank of the hook without whipping, and a neat connection made. Instead of making grooves or depressions a, c, in the shank, so that one of them is presented to the barb of the hook, as illustrated in Figures 1 and 2, the said grooves or depressions may be made at right angles to those represented in Figures 1 and 2, as illustrated in Figure 5, where the eye is marked b and one of the grooves or depressions a.

Figure 6 represents the upper part of the shank of a fish hook constructed according to my Invention, in which an eye only (or an eye with short grooves or depressions) is employed, and Figures 7 and 8 illustrate the manner in which the gut is fastened to the said shank. The eye is marked f, and the twisted or doubled gut fastened to the shank by the said eye is marked g. In fastening the gut g to the hook the gut is passed through the eye and tied at the said eye, and also above the end of the shank, in the manner represented in Figures 7 and 8. I prefer to apply the eye and depressions represented in Figures 1, 2, 3, 4, and 5 to small fish hooks, and the eye Figures 6, 7, and 8 to large fish hooks, but either of the methods described may be applied to various sized hooks and to hooks of various kinds.

Having now described the nature of my Invention, and the manner in which the same is to be performed, I wish it to be understood that I do not limit myself to the precise details herein described and illustrated in the Drawing, as the same may be varied without departing from the nature of my Invention; but I claim as my Invention the improvements in fish hooks herein-before described and illustrated in the accompanying Drawing, that is to say, making at or near the end of the shank of the fish hook an eye (by stamping or piercing through the wire), either with side grooves or depressions, into which the said

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eye opens, or without side grooves or depressions, substantially as described and illustrated, by means of which eye, or eye and grooves or depressions, the gut or other material is securely and readily attached to the shank.

5 In witness whereof, I, the said Joseph Warner, have hereunto set my hand and seal, this First day of August, in the year of our Lord One thousand eight hundred and sixty-six.

JOSEPH WARNER. (L.S.)

Witness,

10 WILLIAM JAMES,  
Redditch.

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LONDON:  
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1866.